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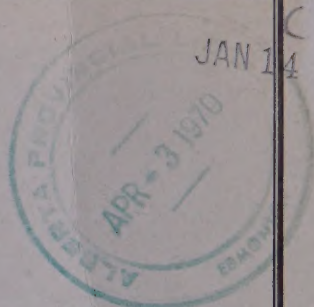
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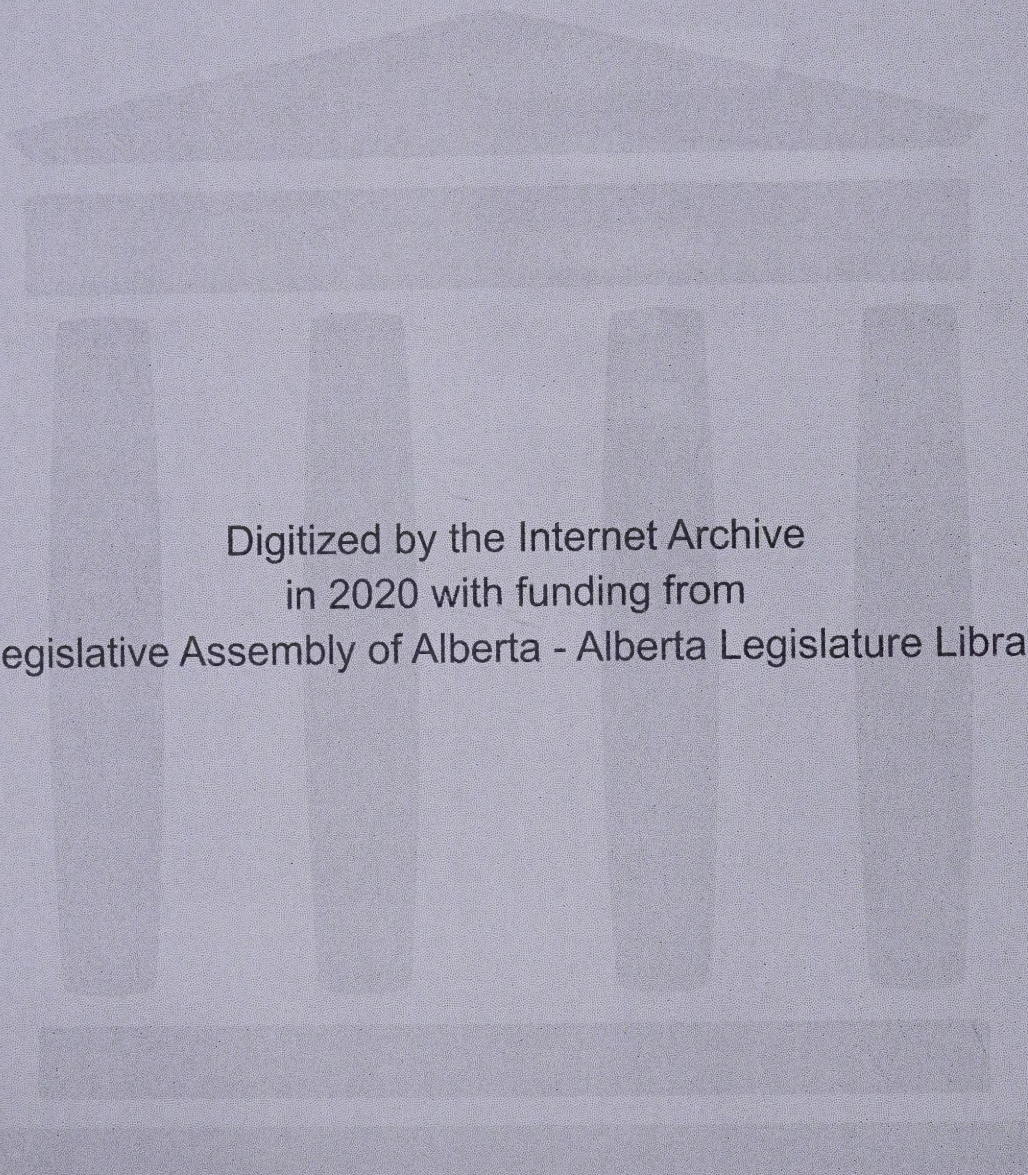
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ANNUAL REPORT
OF
THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA
1969

Edmonton:
Printed by L. S. Wall, Queen's Printer



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ANNUAL REPORT
OF
THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA

1969

Edmonton:
Printed by L. S. Wall, Queen's Printer

Edmonton, Alberta,
January 28th, 1970.

TO THE HONOURABLE A. RUSSELL PATRICK,
Minister of Mines and Minerals.

Sir:

I have the honour to submit the Annual Report of the Mines Division of the Department of Mines and Minerals for the year ending December 31st, 1969.

Respectfully submitted,
PHILIP MELSON,
Director of Mines.

ANNUAL REPORT OF THE MINES DIVISION FOR THE YEAR ENDING DECEMBER 31st, 1969

In this report tonnages are quoted in tons of 2,000 pounds.

The output of coal from the mines in the province was 4,426,060 tons, with a valuation of \$13,483,048. This shows an increase of 500,946 tons, and an increase of \$885,867, compared with the previous year. The low increase in valuation is due to the fact that coal mined by McIntyre Coal Mines Ltd., was stockpiled and no valuation was given.

There were 2,646 tons of coal used to make 2,766 tons of briquettes valued at \$36,054. This shows a decrease of 4,470 tons of briquettes made and a decrease in valuation of \$41,474, compared with the previous year.

The disposition of coal for 1969 and comparison with the previous year follows:

	1969 (Tons)	1968 (Tons)
Sold for consumption in Alberta	2,991,312	2,672,852
Sold for consumption in British Columbia	143,783	142,589
Sold for consumption in Saskatchewan	71,480	175,948
Sold for consumption in Manitoba	67,479	73,558
Sold for consumption in Ontario	13,430	15,097
Sold for consumption elsewhere	349	54
Sold to the United States	10,651	9,549
Sold to Japan	891,769	809,437
Sold to railway companies	2,967	3,201
Put to stock	375,402	74,868
Put to waste		11,313

The above tonnages include lifted from stock and waste heaps which are not included in the total output.

The Alberta consumption includes coal used under colliery boilers and includes coal making briquettes.

There were 6 underground mines and 23 strip mines making a total of 29 mines producing coal during the year. The mines employed 1,209 persons who worked 274,684 shifts. This shows a decrease of 1 mine, an increase of 106 persons, and an increase of 23,631 shifts, compared with the previous year. There were 23 strip mines employing 296 persons who worked 68,455 shifts and produced 3,334,462 tons. This shows a decrease of 1 strip mine, an increase of 14 persons, an increase of 4,334 shifts, and an increase of 336,294 tons from stripping operations, compared with the previous year.

The number of mines using electrical power during the year was 24. The following table shows the comparison of purchased electrical power in K.W. hrs. by mines for the past ten years:

1960	26,231,225	1965	20,001,530
1961	21,694,596	1966	25,690,710
1962	20,436,598	1967	35,270,464
1963	22,062,185	1968	34,507,138
1964	21,930,976	1969	40,784,932

The total horsepower of electrical motors in use was 37,062 h.p., an increase of 7,961 h.p., in comparison with 1968. The following tables show a breakdown of horsepower in use, both in sub-surface mining operations and strip mining operations.

THE MINES DIVISION

SUBSURFACE OPERATIONS

Above Ground		Below Ground	
Duty	H.P.	Duty	H.P.
Haulage	1,948	Haulage	4,042
Ventilation	1,005	Ventilation	498
Air Compressing	2,750	Pumping	588
Preparation Plants	3,102	Mechanical Mining	6,023
Miscellaneous	1,705	Miscellaneous	255
Total	10,510	Total	11,406

STRIP MINING OPERATIONS

Duty	H.P.
Preparation Plants	3,593
Compressors	122
Pumping	319
Drilling	628
Electric Shovels & Draglines	9,772
Miscellaneous	712
Total	15,146

The following figures show the number of certain types of electrical equipment used underground during the past ten years:

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Cutting Machines	71	66	56	46	46	36	43	36	28	24
Battery Locomotives	22	25	27	27	22	15	20	16	16	18
Trolley Locomotives	8	10	9	9	7	5	7	2	2	2
Conveyors	30	33	31	30	30	22	25	32	28	38
Coal Drills	56	59	50	53	45	41	49	38	37	30
Continuous Miners	1	1	1	1	1	2	3	5	6	14
Shuttle Cars	0	0	0	0	2	2	3	5	7	11
Face Loaders	15	17	16	16	9	8	9	10	10	13

Twenty-three quarries produced 27,669,622 tons of shale, clay, limestone, building stone, bentonite and oil sands, an increase of 10,521,370 tons compared with the previous year.

The total horsepower of electrical motors used in quarries was 18,957 h.p. The following table shows a breakdown of horsepower in use:

QUARRYING OPERATIONS

Duty	H.P.
Drilling	305
Electric Shovels & Draglines	675
Excavators	6,000
Miscellaneous	11,977
Total	18,957

Two hundred and twenty-four inspections were made under the terms of The Coal Mines Regulation Act and 61 under The Quarries Regulation Act.

In addition to the above, 55 inspections were made at 43 abandoned mining locations. Remedial work was required and completed at 13 mines. Nine inspections were made for the cancellation of mining leases.

All complaints made to the Division were investigated.

The total number of accidents in coal mines reported was 25. The number of fatal accidents was 3 compared to none in the previous year. There were 2 serious accidents in quarries.

There were no prosecutions for contravention of The Coal Mines Regulation Act.

Written examinations under The Coal Mines Regulation Act were held on May 6th, 7th and 8th at Edmonton and Calgary and on October 31st at Edmonton, with successful candidates as follows: 4 first class, 1 second class, six third class, 1 surveyor (underground mines), 2 first class mine electricians, 2 second

class mine electricians, 2 managers (strip mines), 1 foreman (strip mines), and 1 blaster (strip mines).

Written examinations under The Quarries Regulation Act were held on April 30th, May 6th and May 8th, 1969, with successful candidates as follows: 4 managers, 13 foremen.

Six blasters' certificates were issued to successful candidates on oral examination.

Seven examinations were held for miners' certificates and 78 certificates were issued to successful candidates. Eighteen substitute miners' certificates, 157 miners' provisional certificates and 239 miners' permits were granted, making a total of 492 certificates issued, which is an increase of 368 certificates for the year.

Eleven Mine Rescue certificates were issued during the year. A National Mine Rescue competition was held on June 13th and 14th at Saskatoon and the successful team was from Nova Scotia.

Two new mines were started in 1969. Mine 1768, operated by Cardinal River Coals Ltd., at Luscar and Mine No. 1769, operated by Calgary Power Ltd. (Highvale Mine), Seba Beach. Neither reached the production stage during 1969.

Mine No. 2, operated by The Canmore Mines, Limited, Canmore, renovated the tippie and installed a new washery. A 3,000,000 B.T.U. Flamemaster Mine Air Heater and a 30" Twin Diesel Coal auger were also obtained.

Mine No. 1747, operated by Coleman Collieries Ltd., Coleman, completed a new preparation plant during the year, with a total power installation of 1,846 H.P. Two Joy C.M.6 continuous miners and a Joy 10 SC shuttle car were installed underground. A Flamemaster Mine Air Heater was also put into operation.

Mine No.1757 (Whitewood Mine), operated by Alberta Coals Ltd., Wabamun, obtained the following during the year: a 7400 Marion 15 cu. yd. dragline, a 4 inch submersible "Flygt" pump and a 600 Amp. Lincoln Welder.

Mine No. 1765, operated by McIntyre Coal Mines Ltd., Grande Cache, installed the following: 2 Joy CM6 and 4 Lee-Norse 45 continuous miners, together with ancillary conveyors and shuttle cars. Two large Mine Air Heaters, two battery operated material cars and a road cleaner. The mine service building and preparation plant are under construction.

Mine No. 1768, operated by Cardinal River Coals Ltd., installed the following: two 300 H.P. P&H 750 H.P. Electric shovels, two 300 H.P. Bucyrus Erie Model 45R Drills and eight 110 ton Lectra Haul Model M 100 trucks. The preparation plant was nearly completed at the end of the year.

Mine No. 1523, operated by Picardville Coal Co. (1960) Ltd., Picardville and Mine No. 1670, operated by Warburg Coal Co. Ltd., Warburg, each installed coal crushers for preparation of stoker sized coal.

Mr. John D. Shaw was appointed as District Inspector on December 1st.

THE MINES DIVISION

NUMBER OF MINES PRODUCING, OPENED AND ABANDONED
DURING THE YEAR ACCORDING TO AREAS AND KIND OF COAL

Director of Mines - P. Melson, Agriculture Building,
Edmonton 6, Alberta. Telephone 229-4421

Electrical Inspector of Mines - J.S. Watson, Agriculture
Building, Edmonton 6, Alberta. Telephone 229-4425

Inspection District	Area	Area Number	Character of Coal	No. of Mines producing during the year	No. of Mines opened during the year	No. of Mines abandoned during the year	Name and Address of District Inspectors of Mines
Calgary	Carbon	6	Sub-bituminous	1	...	...	J. J. Kubin, 906, John J. Bowlen Bldg., 620 - 7th Ave. S.W., Calgary, Alberta, Tel. 268-8340
	Cascade	7	Bituminous	1	...	...	
	Drumheller	14	Sub-bituminous	3	...	1	
	Sheerness	38	Sub-bituminous	1	...	...	
Edmonton	Ardley	1	Sub-bituminous	2	...	...	M. Aschacker, J. Shaw, 801, Agriculture Bldg., Edmonton 6, Alberta. Tel. 229-4423 229-4424
	Camrose	5	Sub-bituminous	1	...	...	
	Castor	8	Sub-bituminous	3	...	...	
	Coalspur	11	Bituminous	1	...	...	
	Edmonton	15	Bituminous	3	...	...	
	Mountain Park	24	Bituminous	...	1	...	
	Pembina	31	Bituminous	3	1	...	
	Smoky River	10	Bituminous	1	...	...	
	Tofield	42	Sub-bituminous	1	...	...	
	Westlock	45	Sub-bituminous	2	...	...	
Lethbridge	Brooks	3	Sub-bituminous	1	...	...	I. N. Potter, Administration Bldg., 909 - 3rd Ave. North, Lethbridge, Alberta. Tel. 328-4471
	Champion	9	Sub-bituminous	...	...	1	
	Crownsnest	12-13	Bituminous	3	...	...	
	Lethbridge	20	Bituminous	1	...	...	
	Taber	41	Sub-bituminous	1	...	...	
Total.....		..		29	2	2	

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PARTICULARS WITH REFERENCE TO THE COAL MINING INDUSTRY IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1969.

SUMMARY OF STATISTICS

Number of tons of coal produced.....	4,426,060
Total valuation of coal produced.....	\$ 13,483,048
Number of tons of briquettes made.....	2,766
Total valuation of briquettes made.....	\$ 36,054
Number of mines in operation.....	29
Number of mines opened.....	2
Number of mines abandoned.....	2
1 mine or 3.45% of the total operating produced	47.85% of the output
3 mines or 10.34% of the total operating produced	10.46% of the output
4 mines or 13.7% of the total operating produced	33.9% of the output
10 mines or 34.48% of the total operating produced	6.4% of the output
11 mines or 37.94% of the total operating produced	1.21% of the output
Average number of persons employed.....	1,209
Average number of persons employed in underground mining.....	913
Average number of persons employed in strip mining.....	296
Average number of days worked.....	227
Total number of manshifts.....	274,684
Number of separate accidents causing loss of life.....	2
Number of fatal accidents above ground.....	...
Number of fatal accidents below ground.....	3
Number of serious accidents above ground.....	1
Number of serious accidents below ground.....	4
Number of slight accidents above ground.....	3
Number of slight accidents below ground.....	14
Total purchased electric power (kilowatt hours).....	40,784,932
Number of trade name certificates issued.....	3
Number of provisional first class certificates issued.....	9
Number of provisional second class certificates issued.....	13
Number of provisional third class certificates issued.....	31
Number of provisional electricians' certificates issued.....	31
Number of provisional surveyors' certificates issued.....	1
Number of provisional strip mine managers' certificates issued.....	...
Number of provisional strip mine foremen's certificates issued.....	10
Number of provisional strip mine blasters' certificates issued.....	3
Number of provisional miners' certificates issued.....	157
Number of miners' permits issued.....	239
Number of first class certificates issued.....	1
Number of second class certificates issued.....	1
Number of third class certificates issued.....	4
Number of mine surveyors' certificates issued.....	1
Number of first class electricians' certificates issued.....	2
Number of second class electricians' certificates issued.....	1
Number of strip mine managers' certificates issued.....	4
Number of first class certificates issued up to Dec. 31/69.....	318
Number of second class certificates issued up to Dec. 31/69.....	626
Number of third class certificates issued up to Dec. 31/69.....	1,875
Number of surveyors' certificates issued up to Dec. 31/69.....	253
Number of first class mine electricians' certificates issued up to Dec. 31/69	180
Number of second class mine electricians' certificates issued up to Dec. 31/69	140
Number of strip mine managers' certificates issued up to Dec. 31/69.....	183
Number of strip mine foremen's certificates issued up to Dec. 31/69.....	268
Number of strip mine blasters' certificates issued up to Dec. 31/69.....	29
Number of strip mine surveyors' certificates issued up to Dec. 31/69.....	2
Number of miners' certificates issued up to Dec. 31/69.....	21,209

THE MINES DIVISION

PARTICULARS WITH REFERENCE TO QUARRIES IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1969.

SUMMARY OF STATISTICS

Number of tons of limestone produced.....	1,516,479
Number of tons of bentonite produced.....	13,312
Number of tons of shale and clay produced.....	508,220
Number of tons of building stone produced.....	1,034
Number of tons of oil-sands produced.....	25,630,577
Number of quarries in operation.....	23
Number of quarries opened.....	1
Number of quarries abandoned.....	...
Number of persons employed.....	359
Average number of days worked.....	239
Total number of man-shifts.....	85,890
Number of serious accidents.....	2
Number of pounds of dynamite used.....	122,800
Number of pounds of ammonia nitrate used.....	3,768,650
Number of detonators used.....	7,037
Number of shots fired.....	13,019
Number of primers used.....	4,095
Number of missed fire shots.....	8
Amount of prima cord used (feet).....	200,370
Number of provisional managers' certificates issued.....	4
Number of provisional foremen's certificates issued.....	13
Number of provisional blasters' certificates issued.....	1
Number of managers' certificates issued.....	4
Number of foremen's certificates issued.....	13
Number of blasters' certificates issued.....	6
Number of managers' certificates issued up to December 31st, 1969.....	35
Number of foremen's certificates issued up to December 31st, 1969.....	69
Number of blasters' certificates issued up to December 31st, 1969.....	76

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ANNUAL PRODUCTION AND VALUATION OF COAL FROM MINES
IN THE PROVINCE OF ALBERTA
For the Years 1950 to 1969 Inclusive

Year	Output Tons	Valuation Dollars
1950.....	8,118,206	\$ 41,631,579
1951.....	7,661,276	41,000,953
1952.....	7,194,472	39,974,318
1953.....	5,917,423	32,158,435
1954.....	4,859,136	26,349,275
1955.....	4,456,578	23,486,399
1956.....	4,329,639	23,283,966
1957.....	3,155,354	17,287,229
1958.....	2,519,939	12,778,111
1959.....	2,549,517	12,892,747
1960.....	2,404,093	11,439,705
1961.....	2,027,826	10,471,217
1962.....	2,087,310	9,983,327
1963.....	2,289,943	9,866,962
1964.....	2,971,133	11,189,087
1965.....	3,413,928	12,172,001
1966.....	3,467,254	12,067,044
1967.....	3,601,559	12,506,450
1968.....	3,925,114	12,597,181
1969.....	4,426,060	13,483,048

PER CAPITA PRODUCTION OF MINES IN THE PROVINCE
For the Years 1950 to 1969 Inclusive

Year	Gross Tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed
1950.....	8,118,206	7,999	1,015
1951.....	7,661,276	7,339	1,044
1952.....	7,194,472	6,936	1,037
1953.....	5,917,423	5,760	1,027
1954.....	4,859,136	4,719	1,030
1955.....	4,456,578	3,801	1,172
1956.....	4,329,639	3,443	1,258
1957.....	3,155,354	2,795	1,129
1958.....	2,519,939	2,021	1,247
1959.....	2,549,517	1,720	1,482
1960.....	2,404,093	1,729	1,390
1961.....	2,027,826	1,323	1,533
1962.....	2,087,310	1,281	1,629
1963.....	2,289,943	1,151	1,989
1964.....	2,971,133	1,188	2,501
1965.....	3,413,928	1,181	2,891
1966.....	3,467,254	1,146	3,026
1967.....	3,601,559	1,162	3,099
1968.....	3,925,114	1,103	3,559
1969.....	4,426,060	1,209	3,661

THE MINES DIVISION

CLASSIFICATION OF OUTPUT IN TONS DURING THE YEARS 1950 to 1969 INCLUSIVE

Year	Bituminous	Sub-bituminous	Coal used in Coke Production	Tons of Briquettes Made	Tons of Coke Made
1950.....	4,793,020	3,325,186	23,079	409,855	16,637
1951.....	4,659,289	3,001,387	2,957	345,768	3,959
1952.....	4,378,622	2,815,850	3,474	424,882	574
1953.....	3,517,199	2,399,924	...	662,536	...
1954.....	2,402,185	2,156,951	...	632,581	...
1955.....	2,114,892	2,341,686	...	452,783	...
1956.....	2,064,723	2,264,916	...	525,202	...
1957.....	1,265,844	1,889,510	...	265,645	...
1958.....	834,256	1,685,683	...	128,782	...
1959.....	814,819	1,731,698	...	99,459	...
1960.....	863,517	1,540,576	2,352	44,111	1,216
1961.....	666,226	1,361,600	661	34,234	491
1962.....	590,139	1,197,171	...	28,531	40
1963.....	635,650	1,651,293	...	31,258	11,677
1964.....	866,221	2,104,912	6,412	36,230	19,971
1965.....	859,176	2,554,752	16,016	34,658	38,804
1966.....	879,569	2,587,685	28,824	27,904	11,387
1967.....	937,836	2,667,723	20,241	21,503	7,430
1968.....	944,180	2,976,634	1,658	7,236	1,261
1969.....	1,231,108	3,594,952	...	2,766	...

* Char

AMOUNT OF COAL SOLD IN TONS DURING THE YEARS 1950 TO 1969 INCLUSIVE FOR CONSUMPTION IN:

Year	Railways	Alberta	B.C.	Sask.	Manitoba	Ontario	Quebec	U.S.A.	China and Japan	Total
1950.....	2,308,365	1,672,519	873,558	1,366,723	586,920	312,563	...	105,765	...	7,226,413
1951.....	2,443,326	1,427,114	896,533	1,322,162	492,737	182,753	...	80,270	44,317	6,891,212
1952.....	2,065,365	1,234,307	1,021,484	1,241,716	384,924	126,381	...	71,817	1,588	6,147,582
1953.....	1,625,783	1,045,482	859,385	1,034,594	274,758	73,117	...	47,119	...	4,960,238
1954.....	743,743	1,064,817	891,194	995,882	292,455	85,836	...	33,124	...	4,107,051
1955.....	431,659	1,080,379	932,764	893,377	293,719	90,727	...	32,941	...	3,755,546
1956.....	385,388	860,329	871,719	871,719	304,918	75,029	...	45,692	...	3,563,733
1957.....	152,693	876,395	672,527	680,297	247,480	68,379	165	46,079	...	2,784,760
1958.....	56,420	838,535	532,911	584,025	226,302	54,887	122	37,154	...	2,352,308
1959.....	39,122	874,622	437,118	549,663	239,503	52,828	80	33,455	...	2,351,110
1960.....	1,045	845,806	379,668	362,383	201,372	40,305	157	30,283	...	2,222,355
1961.....	51,128	791,631	321,909	232,848	159,744	35,466	115	18,066	...	1,954,627
1962.....	32,003	901,107	283,651	347,012	153,561	29,952	75	9,219	...	2,073,367
1963.....	16,001	1,073,606	262,433	343,634	131,471	29,309	118	5,583	...	2,272,713
1964.....	14,451	1,620,893	261,990	279,171	122,590	32,261	x	14,805	...	2,958,791
1965.....	10,798	1,928,684	276,608	388,796	130,861	31,733	85	14,123	...	3,396,489
1966.....	6,631	2,034,814	197,521	376,839	115,771	24,893	*	12,206	...	3,178,410
1967.....	3,960	2,019,036	166,668	503,396	92,934	21,956	...	9,857	...	3,591,312
1968.....	3,201	2,672,852	142,589	175,948	73,558	15,097	54	9,519	...	3,902,285
1969.....	2,967	2,991,312	143,783	71,480	67,479	13,430	349	10,651	...	4,193,220

x Includes 46 tons to N.W.T.

* Includes 8 tons to West Germany

THE MINES DIVISION

COAL PRODUCED BY YEARS FROM 1965 to 1969

BITUMINOUS COAL FIELD

Areas	1965	1966	1967	1968	1969
Group 1:					
Cascade.....	243,084	245,469	288,954	283,719	267,266
Group 2:					
Crowsnest.....	609,408	632,974	620,962	660,780	769,489
Mountain Park....	...	...	...	...	...
Smoky River.....	...	...	24,835	1,265	193,522
Group 3:					
Coalspur.....	194	...	...	...	199
Lethbridge.....	6,490	1,126	3,085	2,716	632
Total.....	859,176	879,569	937,836	948,480	1,231,108

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	32,034	30,358	25,130	23,366	24,186
Brooks.....	6,783	6,384	5,160	4,946	4,856
Carbon.....	11,731	9,028	7,457	4,883	4,271
Champion.....	3,028	1,507	458	...	...
Drumheller.....	285,175	231,893	185,037	162,018	150,336
Edmonton.....	92,277	80,288	63,123	47,892	47,007
Gleichen.....	223	...	...	...	...
Pembina.....	968,488	1,133,180	1,196,637	1,945,467	2,135,158
Taber.....	104,398	60,670	9,929	4,713	3,926
Wetaskiwin.....	1,750	1,372	114	...	...
Group 5:					
Camrose.....	26,400	17,808	16,842	15,408	15,398
Castor.....	768,181	774,339	859,694	636,349	750,748
Redcliff.....	2,016	1,856	541	...	...
Sheerness.....	210,746	199,248	259,720	100,115	29,302
Tofield.....	17,370	15,504	12,026	9,629	8,616
Westlock.....	24,152	24,250	21,855	21,848	21,148
Total.....	2,554,752	2,587,685	2,663,723	2,976,634	3,194,952

HOW THE TOTAL TONNAGE OF BITUMINOUS COAL FROM THE PROVINCE WAS DISPOSED OF BY AREAS DURING 1969

Areas	Sold for Consumption in:								Total Disposition	Put to Stock	Lifted from Stock	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Quebec	Ontario	United States	Japan				
Group 1: Cascade.....	218	4041	9098	...	349	11528	10651	204512	240397	68208	41339	267266
Group 2: Crowneast.....	...	1851	73287	...	...	...	...	687257	762395	85584	78490	769489
Smoky River.....	...	...	...	...	...	...	...	...	...	193522	...	193522
Group 3: Coalspur.....	...	79	120	...	...	...	...	...	199	...	...	199
Lethbridge.....	...	781	...	...	...	...	...	...	781	188	337	632
Total.....	218	6752	82505	...	349	11528	10651	891769	1003772	347502	120166	1231108

THE MINES DIVISION

HOW THE TOTAL TONNAGE OF SUB-BITUMINOUS COAL FROM THE PROVINCE WAS DISPOSED OF BY AREAS DURING 1969

Areas	Sold for Consumption in:								Total Disposition	Put to Stock	Lifted from Stock	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States				
Group 4:												
Ardley.....	...	24186	...	...	...	...	...	...	24186	...	...	24186
Brooks.....	...	4856	...	...	...	...	...	...	4856	...	...	4856
Carbon.....	...	4271	...	...	...	...	...	...	4271	...	...	4271
Dronmiller.....	671	85338	22126	28012	7310	1485	...	...	144942	27790	22396	150336
Edmonton.....	...	46590	...	...	...	417	...	...	47007	...	...	47007
Pembina.....	...	2135158	...	...	...	...	...	...	2135158	...	...	2135158
Taber.....	...	3926	...	...	...	...	...	...	3926	...	...	3926
Group 5:												
Camrose.....	...	15288	...	...	...	...	...	...	15288	110	...	15398
Castor.....	1866	620817	38745	34741	54579	...	...	...	750748	...	...	750748
Sheerness.....	212	14366	407	8727	5590	...	...	...	29902	...	...	29902
Tofield.....	...	8616	...	...	...	...	...	...	8616	...	...	8616
Westlock.....	...	21148	...	...	...	...	...	...	21148	...	...	21148
Total.....	2749	2984560	61278	71480	67479	1902	...	...	3189448	27900	22396	3194952

THE MINES DIVISION

HOW THE TOTAL TONNAGE OF BITUMINOUS COAL WAS DISPOSED OF BY MONTHS DURING 1969

Months	Sold for Consumption in:									Total Disposition	Put to Stock	Lifted from Stock	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan				
January	131	1505	5177	...	...	2546	...	638	57820	67817	5540	3865	69492
February	43	1513	6924	...	...	1844	...	827	68069	79190	14340	...	93530
March	44	712	7523	...	...	1254	...	1029	89705	100267	22084	7344	115007
April	...	710	6881	...	...	416	...	1029	91344	100380	7473	5187	102666
May	...	744	6259	...	...	...	349	741	69833	77326	25809	3131	100004
June	...	724	4594	...	...	381	...	903	112901	119503	14400	12198	121705
July	...	61	4600	...	...	...	...	693	95964	101318	22980	14413	109885
August	...	15	1458	...	...	52	...	585	44522	46630	21301	7651	60280
September	...	223	7285	...	...	819	...	777	66968	76072	41476	3802	113746
October	...	471	15907	...	...	1303	...	1431	74979	19112	10141	...	120523
November	...	338	8561	...	...	1174	...	1054	...	86106	42343	6716	121733
December	...	338	7336	...	...	1769	...	944	119664	130051	28345	55859	102537
Total:	218	6752	82505	...	...	11528	349	10651	891769	1003772	347502	120166	1231108
% of Total Disposition:	.02	.67	8.22	...	...	1.15	.04	1.06	88.84				

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HOW THE TOTAL TONNAGE OF SUB-BITUMINOUS COAL WAS DISPOSED OF BY MONTHS DURING 1969

Months	Sold for Consumption in:								Total Disposition	Put to Stock	Lifted from Stock	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan			
January	276	339583	18349	13143	15656	246	...	...	...	1915	4031	385137
February	131	282631	8213	5876	8248	171	...	...	...	...	1027	304243
March	77	284447	4287	2658	3760	37	...	...	...	1829	1109	295986
April	66	246592	1754	1355	667	...	...	...	...	348	1929	248853
May	184	213216	1701	967	157	...	...	...	...	5211	96	221340
June	79	139780	640	658	...	...	...	...	...	7125	...	148282
July	...	118676	302	296	79	...	...	...	...	...	...	119353
August	77	167540	996	817	131	...	...	...	...	...	...	169561
September	517	241846	5420	3896	5673	380	...	...	...	1589	1082	258239
October	890	308770	7623	16615	14720	510	...	...	...	4819	4031	347916
November	411	317616	5497	9041	9874	387	...	...	...	4180	5295	341711
December	41	325863	6496	16158	8514	171	...	...	...	884	3796	354331
Total:	2749	2984560	61278	71480	67479	1902	...	...	...	27900	22396	3194952
% of Total Disposition:	.09	93.57	1.92	2.24	2.12	.06						

THE MINES DIVISION

PER CAPITA PRODUCTION OF MINES BY AREAS
BITUMINOUS COAL FIELD

Area	Strip and Underground Mining					Strip Mining					Underground Mining				
	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of men shifts	Tons of coal mined per eight hour man-shift	Gross tons of Coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of man shifts	Tons of coal mined per eight hour man-shift	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of man shifts	Tons of coal mined per eight hour man-shift
Group 1: Cascade.....	267,266	251	1,065	59,701	4.48	37,851	8	4,731	1,855	20.40	229,415	243	944	57,846	3.97
Group 2: Gronnest....	769,489	454	1,695	105,950	7.26	222,501	30	7,417	7,975	27.90	546,988	424	1,290	97,975	5.58
Smoky River..	193,522	147	1,316	31,747	6.10	...	...	...	...	...	193,522	147	1,316	31,747	6.10
Group 3: Cedarur....	199	4	50	250	0.80	199	4	50	250	0.80	...	...	...	...	...
Leithbridge...	632	4	158	178	3.55	632	4	158	178	3.55	...	...	...	...	...
Total.....	1,231,108	860	1,432	197,826	6.22	261,183	46	5,678	10,258	25.46	969,925	814	1,192	187,568	5.17

THE MINES DIVISION

OUTPUT AND NUMBER OF MINES PRODUCING

Kind of Coal	Under 1,000 Tons		1,000 to 5,000 Tons		5,000 to 10,000 Tons		10,000 to 50,000 Tons		50,000 to 100,000 Tons		100,000 to 150,000 Tons		150,000 to 200,000 Tons		200,000 to 300,000 Tons		Over 300,000 Tons		Total	
	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output		
Bituminous....	2	831	..	...	..	...	..	...	..	...	2	269,567	1	193,522	1	267,266	1	499,922	7	1,231,108
Sub-bituminous..	..	...	4	14,406	5	38,281	9	190,319	1	96,709	..	...	..	...	1	265,226	2	2,590,011	22	3,194,952
Total.....	2	831	4	14,406	5	38,281	9	190,319	1	96,709	2	269,567	1	193,522	2	532,492	3	3,089,933	29	4,426,060

[illegible]

THE MINES DIVISION

PRODUCTION OF COAL PER EIGHT-HOUR MAN-SHIFT
For the Years 1950 to 1969 Inclusive

Year	Gross tons of coal mined	Total No. of Eight- hour Man-shifts	Average No. of tons of coal mined per Eight-hour shift
1950.....	8,118,206	1,735,316	4.678
1951.....	7,661,276	1,683,061	4.552
1952.....	7,194,472	1,522,264	4.726
1953.....	5,917,423	1,141,531	5.184
1954.....	4,859,136	943,558	5.150
1955.....	4,456,578	783,239	5.690
1956.....	4,329,639	750,318	5.770
1957.....	3,155,354	535,346	5.894
1958.....	2,519,939	386,636	6.517
1959.....	2,549,517	377,870	6.747
1960.....	2,404,093	366,970	6.551
1961.....	2,027,826	285,142	7.112
1962.....	2,087,310	277,198	7.530
1963.....	2,289,943	254,671	8.992
1964.....	2,971,133	285,039	10.423
1965.....	3,413,928	288,871	11.820
1966.....	3,467,254	275,195	12.590
1967.....	3,601,559	263,969	13.643
1968.....	3,925,114	251,053	15.634
1969.....	4,426,060	274,684	16.113

AMOUNT OF MINE TIMBER USED DURING THE YEAR

BITUMINOUS COAL FIELD

Area	Timber lineal feet	Lumber B.M. feet	Lagging lineal feet	Ties lineal feet	Sprags lineal feet
Group 1:					
Cascade.....	135,212	69,899	...	9,992	16,639
Group 2:					
Crowsnest.....	596,080	677,600	50,000	1,113	19,364
Smoky River.....	9,950	...	96,000	...	40,200
Group 3:					
Coalspur.....	...	...	...	750	...
Total.....	741,242	747,499	146,000	11,855	76,203

SUB-BITUMINOUS COAL FIELD

Group 4:					
Drumheller.....	82,621	...	...	2,894	...
Edmonton.....	93,800	13,700	8,000	5,000	...
Total.....	176,421	13,700	8,000	7,894	...

PARTICULARS OF LAMPS IN THE BITUMINOUS AND SUB-BITUMINOUS COAL FIELDS DURING THE YEARS 1968 and 1969.

BITUMINOUS COAL FIELD

	<u>1968</u>	<u>1969</u>
Portable Electric Lamps, Edison Cap Type.....	496	745
Wolfe Flame Type.....	34	65
Total.....	<u>530</u>	<u>810</u>

SUB-BITUMINOUS COAL FIELD

Portable Electric Lamps, Edison Cap Type.....	214	212
Wolfe Flame Type.....	10	9
Total.....	<u>224</u>	<u>221</u>

THE MINES DIVISION

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Name of Explosives							Total
	Stumping Powder	Monobel	BL-100	CXL-ite	Airdox	Amex	Forcite	
Group 1:								
Cascade.....	...	27,850	...	...	...	495	75	28,420
Group 2:								
Crowsnest.....	...	1,050	...	...	...	850	900	2,800
Group 3:								
Coalspur.....	...	...	...	...	...	...	100	100
Total.....	...	28,900	...	...	...	1,345	1,075	31,320

SUB-BITUMINOUS COAL FIELD

Group 4:								
Ardley.....	...	2,200	...	...	...	...	...	2,200
Brooks.....	...	...	2,030	...	...	...	...	2,030
Carbon.....	50	...	...	...	...	...	100	150
Drumheller...	...	...	...	...	9,000	...	...	9,000
Edmonton.....	...	7,139	...	...	...	...	...	7,139
Pembina.....	840	...	...	...	...	...	2,000	2,840
Group 5:								
Camrose.....	...	...	...	...	...	...	140	140
Castor.....	700	4,575	...	...	...	2,700	...	7,975
Tofield.....	...	...	...	...	...	...	1,880	1,880
Total.....	1,590	13,914	2,030	...	9,000	2,700	4,120	33,354

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Electric Detonators	Prima cord	Airdox	Total
Group 1: Cascade.....	23,636	...	...	23,636
Group 2: Crowsnest.....	1,223	...	...	1,223
Group 3: Coalspur.....	75	...	...	75
Total.....	24,934	...	...	24,934

SUB-BITUMINOUS COAL FIELD

Group 4:				
Ardley.....	2,200	...	...	2,200
Brooks.....	1,368	...	...	1,368
Carbon.....	123	...	...	123
Drumheller....	...	...	9,000	9,000
Edmonton.....	7,548	...	...	7,548
Fembina.....	4,013	...	...	4,013
Group 5:				
Camrose.....	490	...	...	490
Castor.....	5,379	...	...	5,379
Tofield.....	280	...	...	280
Total.....	21,401	...	9,000	30,401

There were no missed fire shots blasting coal in mines during 1969.

THE MINES DIVISION

NUMBER OF TONS OF COAL PRODUCED PER POUND OF
EXPLOSIVES USED

BITUMINOUS COAL FIELD

Area	Number of tons of coal mined	Number of pounds of explosives used	Tons of coal mined per pound of explosives used
Group 1:			
Cascade.....	267,266	28,420	9.40
Group 2:			
Crowsnest.....	769,489	2,800	274.82
Smoky River....	193,522	...	...
Group 3:			
Coalspur.....	199	100	1.99
Lethbridge.....	632	...	...
Total.....	1,231,108	31,320	39.31

SUB-BITUMINOUS COAL FIELD

Group 4:			
Ardley.....	24,186	2,200	10.99
Brooks.....	4,856	2,030	2.39
Carbon.....	4,271	150	28.47
Drumheller....	150,336	9,000	16.70
Edmonton.....	47,007	7,139	6.58
Pembina.....	2,135,158	2,840	751.82
Taber.....	3,926	...	...
Group 5:			
Camrose.....	15,398	140	109.98
Castor.....	750,748	7,975	94.14
Sheerness.....	29,302	...	...
Tofield.....	8,616	1,880	4.58
Westlock.....	21,148	...	...
Total.....	3,194,952	33,354	95.79

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Pellet	Monobel	Cilgel	CXL-ite	Amex	Cardox	Forcite	Total
Group 1:								
Cascade.....	...	...	...	7,400	1,155	...	175	8,730
Group 2:								
Crowsnest...	...	...	...	2,152	150,700	...	30,158	183,010
Smoky River.	...	17	...	...	...	...	...	17
Total.....	...	17	...	9,552	151,855	...	30,333	191,757

SUB-BITUMINOUS COAL FIELD

Group 4:								
Brooks.....	...	...	...	...	...	...	3,050	3,050
Drumheller.	...	...	...	5	...	...	...	5
Total.....	...	...	...	5	...	...	3,050	3,055

THE MINES DIVISION

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Electric Detonators	Prima cord	Total
Group 1:			
Cascade.....	6,839	...	6,839
Group 2:			
Crowsnest.....	4,425	...	4,425
Smoky River.....	62	...	62
Total.....	11,326	...	11,326

SUB-BITUMINOUS COAL FIELD

Group 4:			
Brooks.....	62	...	62
Drumheller.....	2	...	2
Total.....	64	...	64

There were no missed fire shots blasting rock in coal mines

ELECTRICITY

Area	Number of Mines using Electricity	Horsepower of Electrical Equipment in Use		Total Horsepower	Purchased Power
		Above Ground	Below Ground		
Ardley.....	1	4	...	4	18,726
Brooks.....	1	22	...	22	41,000
Camrose.....	1	4	...	4	6,000
Carbon.....	1	19	...	19	4,452
Cascade.....	1	4,771	1,591	6,362	11,204,000
Castor.....	3	3,749	...	3,749	4,282,697
Crowsnest.....	1	3,268	2,280	5,548	12,500,000
Drumheller.....	3	1,402	802	2,204	803,122
Edmonton.....	3	395	696	1,091	328,045
** Mountain Park...	1	2,130	...	2,130	...
Pembina.....	2	7,442	...	7,442	8,473,000
Sheerness.....	1	1,271	...	1,271	225,000
Smoky River.....	1	1,100	5,764	6,864	2,820,350
Taber.....	1	10	...	10	10,200
Tofield.....	1	65	...	65	41,880
Westlock.....	2	30	...	30	26,460
Total.....	23	25,682	11,133	36,815	40,784,932

** Did not produce coal in 1969.

COAL-CUTTING MACHINERY

Area	No. of Machines Operated by:			Tons of Coal Mined by:	
	Electricity	Compressed Air		Electricity	Compressed Air
		Picks	Machines		
Cascade.....	3	8	...	150,404	39,630
Crowsnest.....	3	100	...	272,244	210,000
Drumheller.....	4	...	...	85,603	...
Edmonton.....	8	...	...	36,000	...
Smoky River.....	6	...	...	192,724	...
Total.....	24	180	...	736,975	249,630

ACCIDENTS AS THEY OCCURRED BY MONTHS DURING THE YEAR 1969

Months	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
January.....	..	..	1	1	..	..	1	1	2
February.....	..	..	1	1	..	..	2	2	3
March.....	..	..	..	..	..	..	1	1	1
April.....	..	..	..	..	..	1	..	1	1
May.....	..	..	..	..	..	..	2	2	2
June.....	..	..	..	..	..	..	..	..	..
July.....	..	..	..	..	..	1	1	2	4
August.....	..	..	..	..	1	..	1	2	2
September.....	..	..	..	..	..	..	2	2	2
October.....	..	..	..	..	..	..	1	1	1
November.....	..	..	..	..	..	..	3	3	3
December.....	..	1	1	2	..	2	..	2	4
Total.....	..	1	3	4	3	4	14	21	25

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND
DURING THE YEAR 1969

Causes	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Fall of roof or sides.....	..	..	..	..	3	4	5	12	12
Haulage.....	..	..	..	..	..	..	4	4	4
Machinery.....	..	1	..	1	..	..	1	1	2
Miscellaneous.....	..	..	1	1	..	..	1	1	2
Slipped and Fell.....	..	..	2	2	..	..	3	3	5
Total.....	..	1	3	4	3	4	14	21	25

THE MINES DIVISION

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND FOR THE
YEAR 1969, CLASSIFIED ACCORDING TO THE AREA IN WHICH THEY OCCURRED

BITUMINOUS

Area	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Cascade.....	..	1	1	2	..	1	6	7	9
Crowsnest.....	..	..	..	..	..	1	..	1	1
Smoky River.....	..	..	1	1	3	2	5	10	11
Total.....	..	1	2	3	3	4	11	18	21

SUB-BITUMINOUS

Edmonton.....	..	..	..	..	..	..	3	3	3
Castor.....	..	..	1	1	..	..	..	..	1
Total.....	..	..	1	1	..	..	3	3	4

FATAL ACCIDENTS IN MINES

Erwin Jankowski, Miner, 34, on July 30th, 1969, at the mine operated by McIntyre Coal Mines Limited, Grande Cache. A fall of rock and debris occurred, striking workman and causing fatal injuries.

Roderick McLeod, Miner, 56, on July 30th, 1969, at the mine operated by McIntyre Coal Mines Limited, Grande Cache. A fall of rock and debris occurred, striking workman and causing fatal injuries.

Donald Fowler, Machine Operator, 37, on August 7th, 1969, at the mine operated by McIntyre Coal Mines Limited, Grande Cache. Workman was testing the exposed roof at No. 2 Mine, prior to roof bolting, when a large piece of coal slipped from the face knocking him on to the cutting bits of the Joy Continuous Miner, causing fatal injuries.

THE MINES DIVISION

NUMBER OF TONS PRODUCED PER ACCIDENT

BITUMINOUS COAL FIELD

Area	Output	No. of Tons Produced Per Accident			
		Fatal	Serious	Slight	Total
Group 1: Cascade.....	267,266	...	133,633	38,181	29,696
Group 2: Crownest.....	769,489	...	769,489	...	769,489
Snooky River.....	193,522	64,507	96,761	32,254	17,593
Group 3: Coalspur.....	199	...	...	...	...
Lethbridge.....	632	...	...	...	...
Total.....	1,231,108	410,369	246,222	94,700	58,624

SUB-BITUMINOUS COAL FIELD

Group 4: Ardley.....	24,186	...	...	...	...
Brooks.....	4,856	...	...	...	...
Carbon.....	4,271	...	...	...	...
Drumheller.....	150,336	...	...	...	...
Edmonton.....	47,007	...	...	...	...
Pembina.....	2,135,158	...	...	15,669	15,669
Taber.....	3,926	...	...	...	...
Group 5: Camrose.....	15,398	...	...	...	...
Castor.....	750,748	...	...	...	...
Sheerness.....	29,302	...	...	750,748	750,748
Tofield.....	8,616	...	...	...	...
Westlock.....	21,148	...	...	...	...
Total.....	3,194,952	...	...	798,738	798,738

SUMMARY

Bituminous.....	1,231,108	410,369	246,222	94,700	58,624
Sub-bituminous.....	3,194,952	...	...	798,738	798,738
Total.....	4,426,060	1,475,353	885,212	260,356	177,042

CLASSIFICATION OF ACCIDENTS ACCORDING TO OUTPUT OF MINES WHICH PRODUCED DURING THE YEAR 1969

Accidents	Under 1,000 tons	1,000 to 5,000 tons	5,000 to 10,000 tons	10,000 to 50,000 tons	50,000 to 100,000 tons	100,000 to 150,000 tons	150,000 to 200,000 tons	200,000 to 300,000 tons	Over 300,000 tons	Total
Fatal.....	...	...	...	...	...	...	3	...	...	3
Serious.....	...	...	...	...	...	...	2	2	1	5
Slight.....	...	...	...	3	...	...	6	8	...	17
Total.....	...	...	...	3	...	...	11	10	1	25

TONS OF COAL PRODUCED PER ACCIDENT

Fatal.....	...	...	...	...	...	...	64,507	...	...	1,475,353
Serious.....	...	...	...	...	...	...	96,761	266,246	3,089,933	885,212
Slight.....	...	...	...	63,439	...	...	32,254	66,562	...	260,356
Total.....	...	...	...	63,439	...	...	17,593	53,249	3,089,933	1,777,042

THE MINES DIVISION

ACCIDENTS

SUMMARY TABLE SHOWING ACCIDENTS OCCURRING IN THE MINES FROM 1950 to 1969
INCLUSIVE, REPORTABLE UNDER THE COAL MINES REGULATION ACT.

Year	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
1950.....	8,118,206	20	86	97	405,910	94,398	83,693
1951.....	7,661,276	9	85	53	851,253	90,133	144,552
1952.....	7,194,472	7	79	79	1,027,782	91,069	91,069
1953.....	5,917,423	10	59	60	591,742	100,295	98,623
1954.....	4,859,136	8	51	41	607,392	95,277	118,516
1955.....	4,456,578	3	54	52	1,485,526	82,529	85,703
1956.....	4,329,639	6	34	33	721,607	127,342	131,201
1957.....	3,155,354	2	25	15	1,577,677	126,214	210,357
1958.....	2,519,939	6	19	8	419,990	132,628	314,992
1959.....	2,549,517	1	18	10	2,549,517	141,639	254,952
1960.....	2,404,093	2	16	21	1,202,047	150,256	114,481
1961.....	2,027,826	1	9	11	2,027,826	225,314	184,348
1962.....	2,087,310	4	5	23	521,827	417,462	90,753
1963.....	2,289,943	1	3	11	2,289,943	763,314	208,177
1964.....	2,971,133	1	3	20	2,971,133	990,378	148,557
1965.....	3,413,928	6	3	13	568,988	1,137,976	262,610
1966.....	3,467,254	1	4	28	3,467,254	866,814	123,830
1967.....	3,601,559	...	4	17	...	900,390	211,856
1968.....	3,925,114	...	4	30	...	981,278	130,837
1969.....	4,426,060	3	5	17	1,475,353	885,212	260,356

COMPARISON OF PROTECTIVE CLOTHING USED FOR THE YEARS
1967, 1968 and 1969.

Clothing	1967	1968	1969
Hard Hats.....	1,114	1,030	994
Safety Shoes, pairs.....	746	691	905
Goggles, pairs.....	179	160	226
Knee Pads, pairs.....	2	...	36

COMPARISON OF ACCIDENTS PER 1,000,000 TONS AND PER 1,000 MEN EMPLOYED, 1950 - 1969

Year	Tonnage	Total No. of men employed	Fatal Accidents			Serious Accidents			Slight Accidents			Total		
			No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	Per 1,000,000 tons	No.	Per 1,000 men employed
1950.....	8,118,206	7,999	20	2.46	2.50	86	10.59	10.75	97	11.95	12.13	25.01	203	25.38
1951.....	7,661,276	7,339	9	1.17	1.23	85	11.09	11.58	53	6.92	7.22	19.19	147	20.03
1952.....	7,194,472	6,936	7	0.97	1.01	79	10.98	11.39	79	10.98	11.39	22.93	165	23.79
1953.....	5,917,423	5,760	10	1.69	1.74	59	9.97	10.24	60	10.14	10.42	21.80	129	22.40
1954.....	4,859,136	4,719	8	1.65	1.70	51	10.49	10.81	41	8.43	8.69	20.50	100	21.19
1955.....	4,456,578	3,801	3	0.67	0.79	54	12.12	14.21	52	11.67	13.68	100	20.50	28.68
1956.....	4,329,639	3,443	6	1.39	1.74	34	7.85	9.88	33	7.62	9.58	16.86	73	21.20
1957.....	3,155,354	2,795	2	0.63	0.72	25	7.92	8.94	15	4.75	5.37	13.31	42	15.03
1958.....	2,519,939	2,021	6	2.38	2.97	19	7.54	9.40	8	3.17	3.96	13.10	33	16.33
1959.....	2,549,517	1,720	1	0.39	0.58	18	7.07	10.46	10	3.92	5.82	11.37	39	16.86
1960.....	2,404,093	1,729	2	0.83	1.16	16	6.66	9.25	21	8.74	12.14	16.22	22	22.55
1961.....	2,027,826	1,323	1	0.49	0.76	9	4.44	6.80	11	5.42	8.31	10.36	21	15.87
1962.....	2,087,310	1,281	4	1.92	3.12	5	2.39	3.90	23	11.02	17.95	15.33	32	24.98
1963.....	2,289,943	1,151	1	0.44	0.87	3	1.31	2.61	11	4.80	9.56	6.55	32	13.03
1964.....	2,971,133	1,188	1	0.34	0.84	3	1.01	2.52	20	6.73	16.83	8.08	24	20.20
1965.....	3,413,928	1,181	6	1.76	5.08	4	0.88	2.54	13	3.81	11.01	6.44	22	18.63
1966.....	3,467,254	1,146	1	0.29	0.87	4	1.15	3.49	28	8.07	24.43	9.52	33	28.79
1967.....	3,601,559	1,162	...	...	...	4	1.11	3.44	17	4.72	14.63	5.83	21	18.07
1968.....	3,925,114	1,103	...	...	...	4	1.02	3.63	30	7.64	27.20	8.66	34	30.83
1969.....	4,426,060	1,209	3	0.68	2.48	5	1.13	4.13	17	3.84	14.06	5.65	25	20.68

THE MINES DIVISION

BOARD OF EXAMINERS

The Board of Examiners during the year consisted of the following:

As representing:

The Mine Inspectorate: P. Melson, Director of Mines.
 Managers: H. Crawford and E. J. Panchyshyn.
 Underground Miners: S. Liska.
 Strip Mine Workers: K. D. Wiltse.
 Secretary: M. B. Rasmussen.

Examinations for the following classes of certificates were held in Edmonton and Calgary on May 6th, 7th and 8th and in Edmonton on October 31st, 1969.

Five candidates presented themselves for examination for First Class (Underground) Certificates, and four were successful.

One candidate presented himself for examination for Second Class (Underground) Certificate, and was successful.

Ten candidates presented themselves for examination for Third Class (Underground) Certificates, and six were successful.

Two candidates presented themselves for examination for Surveyors' (Underground) Certificates, and one was successful.

Two candidates presented themselves for examination for First Class Mine Electricians' Certificates, and both were successful.

Two candidates presented themselves for examination for Second Class Mine Electricians' Certificates, and both were successful.

Six candidates presented themselves for examination for Managers' (Strip Mine) Certificates, and two were successful.

Six candidates presented themselves for examination for Foremen's (Strip Mine) Certificates, and one was successful.

One candidate presented himself for examination for Blaster's (Strip Mine) Certificate, and he was successful.

The following list gives the names of successful candidates.

UNDERGROUND MINES

FIRST CLASS

Name	Address	Cert. No.	Date of Certificate
Shaw, John D.	Edmonton	5	14-11-69
** Cook, Gordon	Edmonton		
** Hartley, Gerald	Edmonton		
** Parkes, David M.	Edmonton		

SECOND CLASS

Name	Address	Cert. No.	Date of Certificate
Lowther, William B.	Canmore	9	4-6-69

THIRD CLASS

Grainger, Kenneth J.	Canmore	35	5- 6-69
Michalsky, Edgar	Coleman	36	11- 6-69
Squarek, John	Bellevue	37	8-10-69
Skrzyzala, Ludwik	Coleman	38	9-10-69
** Gray, Gilbert L.	Coleman		
** Brady, Ralph G.	Hillcrest Mines		

SURVEYOR

Crawford, Hugh	East Coulee	8	9- 6-69
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FIRST CLASS MINE ELECTRICIAN

Thomson, Donald W.	Halkirk	19	3- 6-69
Claxton, Russell L.	Edmonton	20	24- 6-69

SECOND CLASS MINE ELECTRICIAN

Gomin, Louis	Canmore	8	11- 6-69
** Souvie, Ronald T.	Canmore		

STRIP MINES

MANAGER

Carriere, Louis H.	Estevan, Sask.	24	5- 6-69
Wasson, Waldo B.	Calgary	25	15- 7-69

FOREMAN

** Doerr, Kenneth C.	Calgary		
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BLASTER

** Emblau, Archibald A.	Canmore		
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** Certificate not issued as at December 31st, 1969.

In addition to the foregoing, the following certificates as Manager (Strip Mine) were issued, without examination, under Section 74 (2) of The Coal Mines Regulation Act.

Strickland, Antony	Coleman	23	27- 2-69
Shaw, John D.	Edmonton	26	14-11-69

The following substitute First Class Mine Electrician's Certificate was issued.

Roome, Ronald	Edson	18	17- 2-69
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THE MINES DIVISION

EXAMINATIONS UNDER THE QUARRIES REGULATION ACT

Written examinations for certificates under the above Act were held during the year, on April 30th, May 6th and May 8th.

Eight candidates presented themselves for examination for Managers' Certificates, and four were successful.

Eighteen candidates presented themselves for examination for Foremen's Certificates, and thirteen were successful.

The following list gives the names of successful candidates.

QUARRIES

MANAGER

Name	Address	Cert. No.	Date of Certificate
Love, Dennis E.	Fort McMurray	34	20- 5-69
Fenton, James B.	Exshaw	35	20- 5-69
Coast, Ronald L.	Cadomin	36	23- 5-69
Weston, Peter S.	Exshaw	37	23- 5-69

FOREMAN

Rasmussen, Jens A.	St. Albert	58	20- 5-69
Shellian, Andrew F.	Canmore	59	20- 5-69
Bjur, Edward E.	Fort McMurray	60	20- 5-69
Herman, Alexander A.	Fort McMurray	61	20- 5-69
Hopfner, Donald	Fort McMurray	62	20- 5-69
Mazurenko, Bohdan	Fort McMurray	63	20- 5-69
Taylor, Arthur E.	Fort McMurray	64	20- 5-69
Medwid, Michael E.	Fort McMurray	65	23- 5-69
Barnes, Ronald D.	Fort McMurray	67	23- 5-69
Cameron, Arthur D.	Fort McMurray	68	23- 5-69
Czernick, Wilfred M.	Edmonton	69	23- 5-69
Hoffmann, Frank G.	Exshaw	70	23- 5-69
Higdon, Augustus A.	Fort McMurray	71	23- 5-69

The following list gives the names of successful candidates, by oral examination, for Quarry Blasters' Certificates.

BLASTER

Rice, Douglas A.	Fort McMurray	73	2- 5-69
Skakun, William A.	Fort McMurray	74	2- 5-69
Peters, Rodney W.	Canmore	75	30- 5-69
Routledge, Kenneth A.	Calgary	76	2- 6-69
Ray, Leonel Y.	Fort McMurray	77	23-10-69
Sartorius, Glenn W.	Fort McMurray	78	23-10-69

LIST OF MINES PRODUCING DURING

The Year 1969

Character of Coal:- Bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
2	Cascade Area The Canmore Mines Limited...	Canmore.....	Parts 24-10-5	Canmore Smokeless Coal, Canmore Briquettes.....	1891
1695 1747 1764	Crowsnest Area Coleman Collieries Ltd..... Coleman Collieries Ltd..... Coleman Collieries Ltd.....	Coleman..... Coleman..... Coleman.....	12- 7- 6-5 16-19- 9- 4-5 586-10- 4-5	Coleman Coal..... Vicary Creek Coal..... Vicary Creek Coal.....	1949 1957 1966
1692	Coalspur Area Foothill Coal Company.....	Robb.....	7-33-48-21-5	King Coal.....	1963
1762	Lethbridge Area Bridge Mining Corporation Ltd. Smoky River Area	Lethbridge.....	7-21-10-21-4	Bridge.....	1968
1765	McIntyre Coal Mines Ltd.....	Edmonton.....	57- 8-6 & 58- 9		1967

THE MINES DIVISION

LIST OF MINES PRODUCING DURING

The Year 1969

Character of Coal:- Sub-bituminous

MINES NO.	OPERATOR	MINES OFFICE ADDRESS	MINES LOCATION L.S., S., T., R., M.	REGISTERED TRADE NAME	DATES OF OPENING
809 1734	Ardley Area Sisson's Mine John Lyness.....	Alix..... Deburne.....	S.W. $\frac{1}{2}$ of 2-39-23-4 7-20-58-23-4	Sisson's Coal..... Lyness Coal.....	1919 1953
1404	Brooks Area Kleenbirm Collieries Ltd.....	Bow City.....	Pts. of 15-17-17-4	Birnmel Coal.....	1932
724	Camrose Area Burnstead Coal Ltd.....	Round Hill.....	N. $\frac{1}{2}$ of 6-14-48-18-4	Burnstad's Coal.....	1917
194	Carbon Area New Ghost Pine Coal Co. Ltd.. Castor Area	Three Hills.....	449-31-22-4	New Ghost Pine Coal.....	1909
1046 1578 1614	Alberta Coal Ltd..... Forestburg Collieries Ltd.... Stettler Coal Co. Ltd..... Drumheller Area	Halkirk..... Forestburg..... Halkirk.....	1543-6-20-40-15-4 N.W. $\frac{1}{4}$ of 6-41-15-4 11-35-40-16-4	Cordel Coal, Vesta Coal, Sterling, Victory Coal, Blue Flame Coal..... Diplomat Coal, Ambassador..... All-Fire Coal.....	1922 1941 1943
1666 1742	Subway Coal Company..... Century Coals Limited.....	Rosedale..... East Coulee.....	15-16-28-19-4 14- 6-27-18-4	Subway Coal..... Atlas Coal, Commander Coal, New Wild Fire Coal, New Murray Coal, Western Gem, Wy-Grade, Purity Hard..... Utility Coal.....	1947 1936 1960
1756	Fox Coulee Coals Ltd.....	Drumheller.....	2-17-29-20-4		

LIST OF MINES PRODUCING DURING

The Year 1969

Character of Coal:- Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
1582 1626 1727	Edmonton Area Egg Lake Coal Co. Ltd..... Star-key Mines Limited..... Whitemud Creek Coal Co. Ltd..	Morinville..... St. Albert..... Edmonton.....	W. $\frac{1}{2}$ of 36-56-26-4 16, 10&11-35-54-25-4 S.W. $\frac{1}{4}$ of 13-52-25-4	Egg Lake Coal..... Star-key Coal..... Red Hot Coal.....	1941 1945 1942
1670 1739 1757	Pembina Area Warburg Coal Co. Ltd..... Charles Ostertag..... Alberta Coal Ltd.....	Warburg..... Evansburg..... Wabamun.....	12-13-49- 3-5 S.W. $\frac{1}{4}$ of 10-54- 7-5 Pts. of 14&15-53- 4-5	Pinter Coal..... Pembina Peerless Coal..... Whitewood.....	1948 1954 1962
443	Sheerness Area Alberta Coal Ltd.....	Sheerness.....	S.E. $\frac{1}{4}$ of 13-29-13-4	Roselyn, Berry Creek, Volcano.....	1915
1766	Taber Area Henry Miller (Taber Ajax).... Tofield Area	Taber.....	4, 10&11-10-17-4	Taber Ajax.....	1968
215	Dodds Coal Mining Co. Ltd.... Westlock Area	Ryley.....	S. $\frac{1}{2}$ of 14-49-18-4	Dodds Coal.....	1909
1523 1562	Picardville Coal Co. (1960) Ltd. North Point Coal Co. Ltd....	Picardville..... Thorhild.....	16-35-58-27-4 1-11-60-21-4	Picardville Coal..... North Point Coal.....	1960 1959

THE MINES DIVISION

LIST OF QUARRIES PRODUCING DURING

The Year 1969

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L. S. S. T. R. M.	DATE OF OPENING
Q 38	Athabasca Valley Development Corporation Ltd. Brule Area	Calgary.....	Limestone.....	5&11-13-49-27-5	1958
Q 27	Cascade Area				
Q 2	Canada Cement Company Limited.....	Exshaw.....	Limestone.....	27&28-24- 9-5	1906
Q 28	Rundle Rock Building Stone Co. Ltd.....	Exshaw.....	Shale.....	7-25- 8-5	1956
Q 47	Loders, Lime Division.....	Calgary.....	Building Stone.....	17,18&19-25-10-5	1962
Q 58	Thunderstone Quarries Ltd.....	Exshaw.....	Limestone.....	24-24-10-5	1960
Q 70	Cascade Builders Limited.....	Canmore.....	Building Stone.....	12- 7-24- 9-5	1961
		Calgary.....	Limestone.....	8-28-22- 6-5	1969
Q 37	Castor Area				
	Dresser Industries Inc.....	Rosaling.....	Bentonite.....	15&16-31-42-17-4	1958
Q 8	Crowsnest Area				
	Summit Lime Works Ltd.....	Crowsnest, B.C.....	Limestone.....	7- 8- 5-5	1920
Q 5	Edmonton Area				
Q 22	Northwest Brick and Tile.....	Edmonton.....	Clay.....	21-53-25-4	1911
	Inland Cement Industries Limited.....	Edmonton.....	Clay.....	15&22-53-25-4	1955
	Mountain Park Area				
Q 21	Inland Cement Industries Limited.....	Cadomin.....	Limestone.....	13-30-46-23-5	1955

LIST OF QUARRIES PRODUCING DURING

The Year 1969

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L.S. S. T. R. M.	DATE OF OPENING
Q 64	Sunalta Oyster Shell Mines Ltd. Magrath Area	Cardston.....	Limestone.....	5- 3- 4-27-4	1964
Q 34	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	5,6,11&12-20- 8- 3-4	1957
Q 39	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	20- 8- 4-4	1959
Q 45	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	10&15- 9- 8- 4-4	1959
Q 66	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	6-11- 7- 2-4	1967
Q 7	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	S.W. † of	1913
Q 14	Medicine Hat Brick & Tile Company, Limited.	Medicine Hat.....	Shale.....	1&2-31-12- 4-4	1951
Q 24	No Area Consolidated Concrete Industries Ltd.....	Calgary.....	Shale.....	3,4&5-32-21-29-4	1956
Q 36	No Area Northwest Brick and Tile.....	Edmonton.....	Shale.....	N.E. † of	1958
Q 41	Syncrude Canada Ltd.....	Edmonton.....	Oil-Sands.....	5&6-16-66-22-4	1959
Q 65	Great Canadian Oil Sands Limited.....	Edmonton.....	Oil-Sands.....	15-34-92-10-4 23-92-10-4	1964

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